

Addressees:

Director, National Photographic Interpretation Center
Director of Foreign Missile and Space Analysis Center
Director of Scientific Intelligence
Director of Computer Services
Director of Communications
Director of Special Projects
Director of ELINT
Chief, Technical Services Division
Training Officer, National Photographic Interpretation Center
Training Officer, Foreign Missile and Space Analysis Center
Training Officer, Office of Scientific Intelligence
Training Officer, Office of Computer Services
Training Officer, Office of Communications
Training Officer, Office of Special Projects
Training Officer, Office of ELINT
Training Officer, Technical Services Division

SECRET

Approved For Release 2005/11/21 : CIA-RDP78-03576A000100020012-6

COURSE CRITIQUE

Please rate 1-10 (poor to excellent respectively) by placing a check on the scale given. Comment below question where indicated. Use back of pages if needed.

FORMRATING

1. Format of the course was intended to accommodate to a rough 5% time commitment and to provide for a full-day class treatment of a particular topical area. Please rate:

1 day/month

4 hours/every 2 weeks

1	✓	1
1		1

Other Alternatives:

Friday is the worst day for an all day session. Do not schedule Friday afternoon half day sessions either. Without working Saturday, some of us can't just drop all our projects for the sake of the course

2. The point of the applications session was to illustrate where current course material was utilized in the real world. Please rate effectiveness:

Material relevance

Applications speakers

1		✓	10
1		✓	10

3. The purpose of the homework was to exercise topical material with about 8 hours of work. Please rate these:

37

3 one-hour problems

20 ten-minute problems

1		✓	10
1		✓	1

4. The goal of the intermediate 2-hour session was to give a "keep-alive" exercise in the topical area. Please rate these alternatives for continuity:

Problem-solving session

Second applications session

1		✓	10
1	✓		10

5. The class was intended to be weighted towards a blackboard-pictorial development in order to convey modelling concepts more readily. Please rate:

[?]
(Diagrammatic presentation
Mix of vuegraphs & chalkboard

1	✓	10
1	✓	10

6. The symbology of various systems disciplines is confusing due to the separate source developments. An effort at consistency was made in order to permit cross interpretation within the technical literature. Please rate effectiveness:

Common symbology
Example illustrations

1	✓	10
1	✓	10

7. The intent of notes and handout material furnished throughout the month was to tie course topics to technical literature. Please rate:

Effectiveness of handout
reprints
Effectiveness of specially
developed handouts

1	✓	10
1	✓	10

8. General impedimenta such as same room same day/month, same format, etc., for providing continuity. Please rate:

Room
Day *or long* advance notice
Daily sequence

1	✓	10
1		10
1	✓	10

9. The course was designed to present a semi-unitary approach to several disciplines: Please rate applicable areas 1-10:

Communications	<u>7</u>	Optics	<u>7</u>	Acoustics	<u>5</u>
Hum. Eng. & Biomed.	<u>3</u>	Seismics	<u>3</u>	Pictorial	<u>5</u>
Computer Technology	<u>10</u>				

Radar 10

SUBSTANCE

RATING

10. The course material was split 50% basic math tools and 50% in commonality subsystems. (Those subsystems which are pervasive in designs across disciplines.) The sequence was that recommended by ASEE for math modelling related to several fields. Please rate:

Balance of material	1	_____	✓10
Total content	1	_____	✓10

See reverse side for comments

The sequence is given below for each session. Please give your rating for both material content and for the applications given both formally and in the course of concept development.

11. Session I; Vectorial Representation; matrices, num. analysis, linear systems, sampling, manipulation

Material	1	_____	✓10
Application	1	_____	✓10

12. Session II; Transforms; convolution, Fourier and Laplace transformations, Z transforms, impulse response, numerical analysis.

Material	1	_____	✓10
Application	1	_____	✓10

13. Session III; Probability and Statistics; random var., expectancy, density functions, distributions, confidence limits

Material	1	_____	✓10
Application	1	_____	✓10

14. Session IV; Stochastic Variable; stationarity, ergodicity, moments, correlation, power spectral density, white noise, square law detection.

Material	1	_____	✓10
Application	1	_____	✓10

I judge "Application" in the more general light that it is difficult to apply much of the ^{new} material ^(ie formal mathematics) to my every day work. Nevertheless I consider it valuable as an aid to understanding work that others are doing or have done.

I have made no attempt to exercise subtle judgment on the relative merits of one session versus another. It's all important to the understanding of complex electronic systems.

15. Session V; Signal Detection; value, cost likelihood ratio detection, Bayes Law.

Material
Application

1		✓	10
1		✓	10

16. Session VI; Detector Subsystems I; receiver operating characteristics, detection situations, S/N ratio, data smoothing and prediction.

Material
Application

1		✓	10
1		✓	10

17. Session VII; Detector Subsystems II; non-white noise, whitening, matched filtering, threshold, detectability Markov chains.

Material
Application

1		✓	10
1		✓	10

18. Session VIII; Spatial Processing I; space-time relationships, spatial filtering, correlation matrix for signal and noise.

Material
Application

1		✓	10
1		✓	10

19. Session IX Spatial Processing II; optimum array, shading, optimum filtering, lobe periodicity.

Material
Application

1		✓	10
1		✓	10

20. Session X; Servomechanisms and Control; closed loop systems, regulation, feedback, root locus, stability criteria, bang-bang systems.

Material	1	<input checked="" type="checkbox"/>	10
Application	1	<input checked="" type="checkbox"/>	10

21. Session XI; Modulation; analog modulation, AM, FM, PM, suppressed band modulation, effects of index of modulation noise immunity.

Material	1	<input checked="" type="checkbox"/>	10
Application	1	<input checked="" type="checkbox"/>	10

22. Session XII; Modulation; PPM, PWM, PCM, error correction codes, noise immunity, entropy. (Content Only)

Material	1	<input checked="" type="checkbox"/>	10
Application	1	<input checked="" type="checkbox"/>	10

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